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PATENT 11-7-95

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

Applicant: George Franklin Emerson : Paper No:

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Serial No: 08/474,743 : Group Art Unit: 2101

Filed: June 7, 1995 : Examiner:

For: **COMBINED ACOUSTIC AND ELECTRONIC PIANO  
IN WHICH THE ACOUSTIC ACTION IS DISABLED  
WHEN PLAYED IN ELECTRONIC MODE**

RECEIVED

SEP 20 1995

GROUP 2100

INFORMATION DISCLOSURE STATEMENT

THE COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

Dear Sir:

In accordance with 37 C.F.R §§1.97 and 1.98, Applicants herewith submit certain patent references and other information which the Patent & Trademark Office may wish to consider in examining the above-identified application. The references and information are listed below, and are also listed on the attached form PTO-1449.

<u>REFERENCES</u>	<u>INVENTOR</u>	<u>ISSUE DATE</u>
2,250,065	J.A. Koehl	12/07/40
4,633,753	H. Takahashi	01/06/87
4,679,477	C. Monte	07/14/87
4,682,526	R.J. Hall et al.	07/28/87
4,704,931	Y. Nagai et al.	11/10/87
4,719,834	R.J. Hall et al.	01/19/87
4,744,281	Y. Isozaki	05/17/88
4,970,928	T. Tamaki	11/20/90
4,970,929	M. Ishida	11/20/90
5,003,859	C. Monte et al.	04/02/91
5,115,705	C. Monte et al.	05/26/92
5,192,824	T. Shibukawa	03/09/93
5,196,638	H. Hayashida et al.	03/23/93
5,322,967	T. Matsuda	06/21/94
5,374,775	K. Kawamura et al.	12/20/94

<u>REFERENCES</u>	<u>INVENTOR</u>	<u>ISSUE DATE</u>
5,115,705	C. Monte et al.	05/26/92
5,247,129	K. Nozaki et al.	09/21/93
5,386,083	K. Kawamura	01/31/95
<b><u>Foreign:</u></b>		
0 573 963 A2 (EPO)	K. Kawamura et al.	12/15/93
DE 3707591 C1 (German)*	Seiler, Steffen	05/26/88

\* English language translation attached

**OTHER INFORMATION:**

A prototypical piano was constructed by the Baldwin Piano & Organ Company which included the initial version of the hammer shank stop rail of the present invention. This prototype piano was an upright dual-mode piano and included a pedal dowel, an angled crank, and a pivotable stop rail, similar to the embodiment illustrated in Figures 1-6 of the instant application. To be more precise, the stop rail was made of steel and had a felt lining, similar to the embodiment illustrated in Figures 5 and 6.

This prototype piano was displayed at the NAMM (National Association of Music Manufacturers show at Anaheim, California in January, 1993, and was part of the Baldwin Piano & Organ Company's display at the exhibition in which attendees of the show were allowed to play the piano and to provide comments as to their likes or dislikes. The attendees who showed enough interest to try playing the piano were told that it was an experimental prototype, and that it had a "silent" electronic mode and a "normal" acoustic mode. These persons were asked to provide their impressions as to the "feel" of the key action while using the piano in both of these modes. The feedback from the persons using this prototype piano was generally negative, because the key action in the silent mode was quite different from the key action in the acoustic mode. At the time, it became apparent that the overall design of this prototype needed to be modified significantly before there would be any consumer acceptance.

The persons testing this prototype piano were not asked to sign any type of confidentiality agreements, however, the inner workings of the piano were kept hidden from them. No offers for sale were made at the NAMM show by Baldwin Piano & Organ Company personnel, although some of the attendees that showed an interest in the piano were asked by Baldwin representatives approximately what price they might be willing to pay for such an instrument, assuming the key action problems were solved. At the same time, there were very rough approximations of price discussed with some of these attendees (usually dealers of musical instruments), but it was made clear that these were only rough approximations (and not offers for sale) because the prototype was obviously not ready for production.

After the NAMM show was concluded, the feedback generated by the demonstration of the prototype piano caused the Baldwin Piano & Organ Company to re-evaluate its design criteria for the dual-mode piano. Improvements in the design were ultimately incorporated, although the piano still has not been released for production to the consumer public (as of September 1, 1995). One improvement that was made was to use a hard felt material for the main structural member of the stop rail while maintaining an outer felt lining, as per claim 6 and Figures 5 and 6 of the instant application. Another later improvement has been to use an extruded aluminum material as the main structural member, along with a rubber insert (as per claim 7) or a rubber tube (as per claim 8), as illustrated in Figure 3 of the instant application. None of these latter-described designs have been demonstrated in the public before the filing date of the instant application, June 7, 1995.

Two other similar prototypical pianos were shipped by the Baldwin Piano & Organ Company to its dealers in Dallas, Texas and Boston, Massachusetts in February, 1993 and June, 1993. These pianos were sent for dealer evaluation, and were placed on display by those two dealers for experimental testing by interested consumers. Comments were solicited by the dealers as to the consumers' impression of the experimental pianos, particularly relating to the key action feel in both the silent mode and in the acoustic mode. Many of the comments thus generated were negative, in a similar fashion to the negative comments received from the prototype piano that was displayed at the NAMM show in January, 1993. As at the NAMM show, the consumers evaluating the prototype pianos at these two dealers were not asked to sign confidentiality agreements, however, no offers for sale were made to these consumers, and they were not permitted to view the interior of the piano to see the inner workings of the stop rail design. These two pianos were ultimately returned to the Baldwin Piano & Organ Company at the end of the dealer evaluation periods. The design of the hammer shank stop rail for these two pianos was virtually identical to the design installed in the prototype piano displayed at the NAMM show in January, 1993.

The above-related prototypes had a design that generally falls within the scope of independent claim 1 of the instant application. The specific materials used for the stop rail itself of these prototypes would fall within claim 6 of the instant application. The other independent claims of the present application (i.e., claims 12, 19, 28 and 36) are not related to these prototypical pianos that were displayed to consumers during 1993. Claim 12 describes a fluid-actuated stop rail design that is disclosed in Figures 8, 9A, 9B, and 10. Claim 19 describes a wippen-disabling device that is disclosed in Figure 11. Claim 28 discloses a different type of actuating mechanism for a hammer shank stop rail that is disclosed in Figures 12 and 13. The specific embodiment of Figures 12 and 13, insofar as its use of a hand actuator, is described in claim 33. Claim 36 discloses a cable-actuated rotatable cam which actuates the stop rail, and is described in Figures 7A and 7B. Embodiments defined by the independent claims 12, 19, 28, and 36 were *not* demonstrated to the public before the filing date of the instant application (June 7, 1995).

Copies of the listed references are provided. No representation is made or intended that a prior art search has been made or that no better art than that listed is available.

Respectfully submitted,

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**CERTIFICATE OF MAILING**

I hereby certify that a copy of this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to The Commissioner of Patents and Trademarks, Washington, D.C 20231 this 7th day of September 1995.

